



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

R

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/008,675 01/16/98 NAGATA

A

EXAMINER

IM22/0118

JOHN S MORTIMER
WOOD PHILLIPS VANSANTEN CLARK & MORTIMER
500 WEST MADISON STREET
SUITE 3800
CHICAGO IL 60661

HOPKINS, R

ART UNIT	PAPER NUMBER
----------	--------------

1724

DATE MAILED:

8
01/18/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/008,675

Applicant(s)

Nagata et al

Examiner

Robert Hopkins

Group Art Unit

1724

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☒ Responsive to communication(s) filed on 12-13-99

☒ This action is FINAL.

- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-26 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 11, 12, 18-20 is/are allowed.

☒ Claim(s) 1-10, 13-17, 21-26 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit: 1724

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,3-6,10, and 13 are again rejected under 35 U.S.C. 102(b) as being clearly anticipated by Perkins(3031364).

Perkins teaches a method of treating a power transmission belt/belt sleeve(B) having an endless body with a length extending around an axis and a radially inwardly facing surface and a radially outwardly facing surface, the method comprising the steps of wrapping at least one sheet of vapor-impervious film(20; column 3 lines 50-63) against and around the radially outwardly facing surface of the belt/belt sleeve body, and vulcanizing the belt sleeve with the at least one sheet of vapor impervious film wrapped around the belt/sleeve body. Note that Nylon is mentioned as a film wrap.

Perkins further teaches the step of mounting the belt/belt sleeve on a mandrel(M) and the step of vulcanizing comprises the step of vulcanizing the belt/belt sleeve with the belt/belt sleeve mounted on the mandrel. Perkins further teaches the step of removing the at least one sheet of vapor impervious film from the belt/belt sleeve body after vulcanizing the belt/belt sleeve.

Art Unit: 1724

Perkins further teaches the step of treating and grinding(see abrasive sander wheel 38) the radially outwardly facing surface of the belt/belt sleeve body after removing the at least one sheet of vapor impervious film(see figure 3).

3. Claim 14,16,17,21, 24 and 25 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Perkins(3031364).

Perkins teaches a treating system comprising a belt/belt sleeve(B) having an endless body with a length extending around an axis and a radially inwardly facing surface and a radially outwardly facing surface, at least one sheet of vapor impervious film(20) against and extending around the radially outwardly facing surface of the belt/belt sleeve body, and a vulcanizing vessel(column 3 lines 69-70) in which the belt/belt sleeve with the at least one sheet of vapor impervious film thereon resides and in which a vulcanization process can be carried out. Perkins further teaches a mandrel(M) on which the belt/belt sleeve is mounted. Perkins further teaches at least two layers of vapor impervious film around the belt carcass(see figure 2).

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1724

5. Claim 2 is again rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins(3031364).

Perkins discloses all of the limitations of claim 2 but is silent as to wherein the step of wrapping comprises the step of wrapping at least one sheet of vapor impervious film over at least part of each of the axially spaced, axially facing ends of the belt /belt sleeve body. Examiner respectfully submits that it would have been obvious to someone of ordinary skill in the art the time of the invention to extend the vapor impervious film wrapping of Perkins to extend over the edges of belt sleeve in order to ensure edges of the belt are not damaged during vulcanization by the vapor in the pretreatment chamber.

6. Claim 15 is again rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins(3031364).

Perkins discloses all of the limitations of claim 15 but is silent as to wherein the at least one sheet of vapor impervious film extends at least partially over the axially spaced, axially facing ends of the belt/belt sleeve body. Examiner respectfully submits that it would have been obvious to someone of ordinary skill in the art the time of the invention to extend the vapor impervious film wrapping of Perkins to extend over the edges of belt sleeve to avoid the need to trim excess material from the edges which would be damaged by the exposure to the treatment vapor.

7. Claims 7-9 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins(3031364) taken together with Hamura et al(5192382).

Application/Control Number: 09/008,675

Art Unit: 1724

Perkins discloses all of the limitations of claim 7 but is silent as to wherein the step of grinding comprises the step of grinding at least two grooves in the belt/belt sleeve body through the radially outwardly facing surface to define at least one V-shaped rib extending along the length of the belt/belt sleeve body. Hamura et al discloses a process wherein after vulcanization of a belt, the belt is rotated on cylindrical drums and contacts a grinding wheel having V shaped grindstones on the surface of the wheel. It would have been obvious to someone of ordinary skill in the art the time of the invention to include a grinding step wherein V-shaped grooves are imparted to the length of a vulcanized belt as disclosed by Hamura et al subsequent to formation of an endless belt in the process of Perkins since grinding to form V-belts is a well known post vulcanization shaping process(see figure 3 of Perkins) and because Perkins suggests(column 2 lines 27-30) that vulcanized belts may be subjected to a grinding operation to produce endless belts "of the desired surface smoothness and size".

8. Claim 22 is again rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins(3031364) taken together with Hamura et al(5192382).

Perkins discloses all of the limitations of claim 21 but is silent as to wherein the radially inwardly facing surface of the belt/belt sleeve body has alternating grooves and teeth along the length of the belt/belt sleeve body. Hamura et al discloses a process wherein after vulcanization of a belt, the belt is rotated on cylindrical drums and contacts a grinding wheel having V shaped grindstones on the surface of the wheel. It would have been obvious to someone of ordinary skill in the art the time of the invention to include a grinding step wherein V-shaped grooves are

Art Unit: 1724

imparted to the length of a vulcanized belt as disclosed by Hamura et al so that the vulcanized belt of Perkins et al has V-shaped grooves imparted along the length of the belt.

9. Claims 23,26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins(3031364).

Perkins discloses all of the limitations of claim 23 but is silent as to wherein the radially outwardly facing surface of the belt/belt sleeve body has an axial length and the sheet of vapor impervious film has a width that is greater than the axial length of the outwardly facing surface of the belt/belt sleeve body. Examiner respectfully submits that it would have been obvious to someone of ordinary skill in the art the time of the invention to extend the vapor impervious film wrapping of Perkins to extend over the edges of belt sleeve so that the entire belt sleeve is surrounded by the film. Examiner respectfully submits that such a substitution is well within the purview of someone of ordinary skill in the art during routine experimentation with the apparatus.

Perkins discloses all of the limitations of claim 26 but is silent as to wherein the vapor-impervious film is one of polymethylpentene and polyvinyl chloride. Examiner respectfully submits that both polymethylpentene and polyvinyl chloride are in the same category of vapor impervious films as nylon and are well known synthetic films, therefore it would have been obvious to someone of ordinary skill in the art at the time of the invention to substitute either one of the claimed film materials for the nylon in Perkins in order to secure an equivalent vapor impervious film wrap around the belt carcass during vulcanization of the carcass.

Art Unit: 1724

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoshida(5054642) discloses nylon having application as a vapor impervious resin film.

Allowable Subject Matter

11. Claims 11,12,18-20 are allowed.

Response to Arguments

12. Applicant's arguments filed 12-13-99 have been fully considered but they are not persuasive.

Applicant argues that it does not appear that the pressure wrap is intended to be vapor impervious, and that the pressure wrap is apparently intended to maintain the integrity of the belt, rather than produce a vapor impervious layer. Examiner notes that column 3 line 53 of Perkins discloses that the wrap is formed of nylon in one embodiment. Examiner further notes that page 11 lines 16-17 of the current specification recites "The film 32 is preferably a synthetic resin film of, for example, polyamides(such as nylon 6, nylon 6,6, nylon 6,10)...". Therefore, since nylon, a synthetic resin film, is wrapped around the surface of the belt and the belt with the nylon wrap is vulcanized, then both method claim 1 and apparatus claim 14 are deemed to be clearly anticipated by Perkins. The fact that applicant's specification identifies nylon as a synthetic resin film inherently means that the film also is vapor impervious. Furthermore, by wrapping the nylon film around the belt carcass before vulcanizing the belt, Perkins inherently realizes that the nylon film is preventing hot air from directly contacting the carcass along with holding the belt elements

Art Unit: 1724

under pressure. Examiner furthermore refers applicant to column 8 lines 1-5 of Yoshida, cited as of reference, wherein Yoshida clearly recites that nylon is categorized as a "vapor impervious resin film". Therefore, if the nylon wrap of Perkins is a vapor impervious resin film, the wrap certainly could not be porous to the vapor, as argued by applicant. Examiner furthermore submits that unlike the standardized size jackets of the prior art, clearly the vapor impervious nylon wrap of Perkins has application to any size belt requiring vulcanization.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Hopkins whose telephone number is (703) 308-3913. The examiner can normally be reached on Monday to Friday from 9am to 4pm.

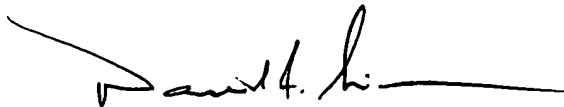
Art Unit: 1724

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Simmons, can be reached on (703) 308-1972. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Rah

January 13, 2000



David A. Simmons
Supervisory Patent Examiner
Technology Center 1700